

**Notice of Allowability**

Application No.

09/581,005

Examiner

Peter Paras, Jr.

Applicant(s)

VON EICHEL-STREIBER ET AL.

Art Unit

1632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment received on 2/2/04.
2. ☒ The allowed claim(s) is/are 52-58 (renumbered as 1-7).
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☒ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: German priority document.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 0304.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Evelyn DeFillo on 3/5/04.

The application has been amended as follows:

In the specification:

On page 43, in line 5 the term "Claims" has been deleted and has been replaced with the phrase "We Claim:"

The title of the invention has been changed to the following:

"Recombinant *Listeria*".

In the claims:

Claims 23-25 and 27-34 have been cancelled. New claims 52-58 have been added as follows:

52. A bacterium, from the genus *Listeria*, comprising an episomal vector that comprises a heterologous gene operably linked to a eukaryotic regulatory sequence, wherein the bacterial genome comprises a functional disruption in the endogenous *dapE* gene comprising the nucleotide sequence set forth in SEQ ID NO: 1, and wherein the bacterium a) is viable; b) can infect eukaryotic cells via its normal route of infection; c)

has an infection cycle that can be terminated by an antibiotic; and d) exhibits properties from the group consisting of: 1) fully pathogenic; 2) attenuated to prevent apoptosis of eukaryotic cells; 3) attenuated to restrict intracellular motility; 4) attenuated to permit efficient elimination after transfer of the heterologous gene to a eukaryotic cell; and 5) non-pathogenic.

53. The bacterium of claim 52, wherein the bacterium is a strain of *Listeria monocytogenes*.

54. A bacterium, from the genus *Listeria*, comprising an episomal vector that comprises a heterologous gene operably linked to a eukaryotic regulatory sequence, wherein the bacterial genome comprises a functional disruption in the endogenous cspL gene comprising the nucleotide sequence set forth in SEQ ID NO: 3, and wherein the bacterium a) is viable; b) can infect eukaryotic cells via its normal route of infection; c) has an infection cycle that can be terminated by an antibiotic; and d) exhibits properties from the group consisting of: 1) fully pathogenic; 2) attenuated to prevent apoptosis of eukaryotic cells; 3) attenuated to restrict intracellular motility; 4) attenuated to permit efficient elimination after transfer of the heterologous gene to a eukaryotic cell; and 5) non-pathogenic.

55. The bacterium of claim 54, wherein the bacterium is a strain of *Listeria monocytogenes*.

56. A bacterial strain, wherein the bacterial strain is *Listeria monocytogenes* EGD Hyl<sub>D491A</sub> and is deposited at the DSMZ (German Collection of Microorganisms and Cell Cultures) under the number of 11881.

57. A bacterial strain, wherein the bacterial strain is *Listeria monocytogenes* EGD Delta acta Delta plcB and is deposited at the DSMZ (German Collection of Microorganisms and Cell Cultures) under the number of 11882.

58. A bacterial strain, wherein the bacterial strain is *Listeria monocytogenes* EGD Delta cspL 1 and is deposited at the DSMZ (German Collection of Microorganisms and Cell Cultures) under the number of 11883.

Art Unit: 1632

Any inquiry concerning this communication or earlier communications from the examiner(s) should be directed to Peter Paras, Jr., whose telephone number is (571) 272-0732. The examiner can normally be reached Monday-Friday from 8:30 to 4:30 (Eastern time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at 571-272-0804. Papers related to this application may be submitted by facsimile transmission. Papers should be faxed via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Official Fax Center number is (703) 872-9306.

Inquiries of a general nature or relating to the status of the application should be directed to Dianiece Jacobs whose telephone number is (571) 272-0532.

Peter Paras, Jr.

Art Unit 1632

**PETER PARAS, JR.  
PRIMARY EXAMINER**

A handwritten signature in cursive script, appearing to read "Pete Paras Jr.", is written below the printed name and title.